



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

ON THE SYNONYMIC HISTORY OF THE GENERA *CLAVA* MARTYN, AND
CERITHIUM BRUGUIERE.

BY WILLIAM HEALEY DALL.

The synonymic history of these genera is quite complicated, especially if one takes into consideration the minor subdivisions.

Most writers have hesitated to undertake revision of the Cerithiacea on account of the difficulties involved. During recent years the subject has been recalled to attention by the elucidation of the true dates of the volumes of Martyn's *Universal Conchologist* and by the publication of Part VII of M. Cossmann's *Essais de Paléoconchologie Comparée*, which included a review of the Cerithiacea.

The conclusions in regard to the validity of certain generic names established by Martyn, which resulted from my determination as to their correct date, has been dissented from by M. Cossmann in his *Essai*, and he supports his arguments by statements of fact which, if uncontroverted, would establish his case.

The difference is, in the main, caused by a different viewpoint as to the reformation of nomenclature, his arguments for which are supported by inaccurate citations.

In 1830 systematists considered it entirely proper to "ignore" little known names; to alter names which did not suit the Latinity or the taste of the person writing; to neglect more or less completely the early history of names; and to cite prelinnean and polynomial writers for systematic synonymy. These ideas, as we all know, were but slowly modified, since they appealed to the common preference for what is familiar, as well as to the indolence and carelessness of the hasty or amateur writer. As all know who have had occasion to use his very useful summaries, M. Cossmann has not, so far, entirely freed himself from these prepossessions, and has even on more than one occasion intimated that the acceptance of one or the other name of two in conflict should depend on the eminence of the author originating the name, rather than on the priority of publication; while his indignation at the resurrection of "obscure" names seems both sincere and profound.

One cannot but feel some sympathy with the regret that familiar (if erroneous) names must be eliminated from general use.

For some years I urged the maintenance of the first British Associa-

tion rules, which required a diagnosis to validate a new genus or subgenus. But these views not being acceptable to the majority of zoologists, and the International Congresses having formulated a series of working rules in which this principle was not enforced, and believing that a stable nomenclature can only result from the general, impartial, rigidly exact enforcement of the rules adopted, I have proceeded in my work on that basis.

That it has resulted in necessary changes was the fault of the illogical and inaccurate methods of the early part of the nineteenth century, which M. Cossmann and those who sympathize with him seem to desire to perpetuate.

One cannot argue on such a question unless from a common standpoint, which being wanting, I have left unanswered numerous criticisms of my work by M. Cossmann, recognizing his right to his own standpoint and the futility of argument under the circumstances.

But if one admits perfect freedom in selection of principles, one does not necessarily waive the right to have the facts in the case accurately stated by the critics. In this direction M. Cossmann's writings leave much to be desired. Lest I should be supposed to acquiesce in them, I have thought it best to select a concrete case, that of M. Cossmann's treatment of the history of Martyn's genus *Clava*, afterwards named *Cerithium* by Bruguière, which M. Cossmann has had occasion to notice in his account of the Cerithiacea in the publication alluded to.

In order to clear up the subject it is necessary to enter into the history of the genus *Cerithium*. This name was first applied by Fabio Colonna in his treatise *De aquatilibus*¹ to a shell afterwards named *Cerithium adansonii* by Bruguière. The name was adopted by Adanson for a group containing Cerites and Turritellas,² one of which, *Le Cerite* (p. 155), he identified with Colonna's shell. These authors were prelinnean and, except historically, not entitled to be cited in synonymy.

In 1792 Bruguière adopted the name and for the first time introduced it into binomial nomenclature,³ naming no type, but dividing the genus into three unnamed groups, the first of which corresponds to *Vertagus* Klein, the first species being *C. obeliscus* Bruguière.

In 1799 Lamarck published his *Prodrome*,⁴ in which he cited as type *Murex aluco* Linné. Two years later, however, in his *Système*,⁵ he

¹ *De aquatilibus aliisque nonnullis animalibus*, Roma, 1616, pp. 53, 57.

² *Sénégal*, pp. 152-160, 1757.

³ *Encycl. Meth.*, I, pt. 2, 1792, p. 467. Not issued in 1789, as stated by Cossmann and various other authors.

⁴ *Prodr. nouv. class.*, p. 73, 1799.

⁵ *Syst. des an. s. vert.*, p. 85, 1801.

mentions as example *C. nodulosum* Bruguière, which was by the latter, as by Adanson, supposed to be Colonna's original species. Roissy⁶ adopted the genus in Bruguière's sense; his first species was a *Vertagus* (Klein). In 1807 Link⁷ followed Lamarck's *Prodrôme* and put under *Cerithium* (Lam.) his species resembling *Vertagus* (Klein), beginning with *C. aluco*, which type was not then discriminated from the others, and gave to Bruguière's second group of true Cerites the name *Aluco* with *Cerithium adansonii* Bruguière as his first species. Montfort in 1810⁸ had also followed the lead of Lamarck in 1799 and figured *Murex vertagus* as the type of *Cerithium* s. s. after eliminating *Telescopium* and *Pyrazus* (= *herculea* Martyn). Schumacher⁹ in 1817 has three groups under *Cerithium*, corresponding to *Pyrazus* Montfort (*C. palustre* Lam.), *Cerithium* Lamarck, 1801 (*C. nodulosum* Brug.), and *Cerithium* Lamarck, 1799 (*C. aluco* Linné). He also adopts Klein's name *Vertagus* with two groups, the first typified by *Murex vertagus* Linné, and the second by *Murex asper* Linné, which differs only by rougher sculpture.

In referring to species I have corrected the synonymy, which is often complicated, but refrain from inserting the details here.

To return to the parallel nomenclature, in 1753 Klein, who was one of the worst of the polynomialists, proposed the name *Vertagus*, his first "species" being *Murex vertagus* Linné. This name of course had no standing. Link in 1807¹⁰ used *Vertagus* for a totally different group containing species of *Terebra*, and Schumacher's return¹¹ to Klein's type was necessarily too late to remedy matters.

Martyn's name *Clava* was first published¹² not later than 1784, as elsewhere proved beyond any doubt. The four species published in that year may be identified as follows:

1. *Clava rugata* Martyn = *Murex asper* Linné.
2. *Clava herculea* Martyn = *Cerithium ebeninum* Brug.
3. *Clava maculata* Martyn = *Cerithium clava* Brug.
4. *Clava rubus* Martyn = *Cerithium echinatum* Lam.

⁶ *Hist. nat. Moll.*, VI, p. 106, 1805.

⁷ *Beschr. Rostock Samml.*, p. 130, 1807.

⁸ *Conch. Syst.*, II, p. 511, 1810.

⁹ *Essai*, pp. 223-4 and 227-8, 1817.

¹⁰ *Beschr. Rostock Samml.*, p. 128, 1807.

¹¹ *Essai*, p. 227, 1817.

¹² *Universal Conchologist*, I, table, Nos. 12, 13. In the second series of forty plates, sometimes called by Martyn Vol. II, figs. 57 and 58 represent respectively *Clava maculata* and *C. rubus* Martyn. The species in Vol. III date only from 1786 and need not be considered in selecting a type, though of interest as showing that Martyn's conception of his genus *Clava* was practically the same as Bruguière's conception of his genus *Cerithium*, eight years later.

These are referable to the following groups:

3. *Cerithium* Lamarck, 1799; type *C. aluco* L. (+ *Pseudovertagus* Vignal, 1904).
4. *Cerithium* Lamarck, 1801; type *C. nodulosum* Brug. (= *Aluco* Link, 1807).
2. *Pyræzus* Montfort, 1810; type *C. ebeninum* Brug.
1. *Vertigus* (Klein) Schumacher, 1817 (not of Link, 1807) = *Clava* Martyn, 1784 + *Rhinoclavis* Swainson, 1840.

It thus appears that, whether we adopt the "first species" rule or the method of "elimination," Martyn's first species becomes his type. *Pseudovertagus (aluco)* is, in my opinion, generically distinct from *Clava* and much more nearly related to the true *Cerites* of Adanson and Lamarck (1801). This conclusion is essentially the same as that reached by Pilsbry.¹³

The date of Gmelin's volume is of general interest to those working in systematic Malacology, so that I have given the details; but for our present purpose it is sufficient to say that Martyn's work (the first 80 plates) is cited throughout Gmelin's volume, and some of his specific names are adopted by Gmelin.¹⁴ This conclusively shows that, whatever the date of either work, Martyn precedes Gmelin, and *Clava* Gmelin, *non* Martyn, becomes a synonym.

M. Cossmann further suggests that a genus *Clavus* precedes and reduces *Clava* Martyn to synonymy. But in this case he has obviously forgotten the fact, patent in any Latin lexicon, that *Clava*, a club, is a feminine substantive not identical with the masculine *Clavus*, a nail. The two are as distinct as *Pica* and *Picus*.

In 1884¹⁵ Jousseaume proposed to apply the name *Clava* to the group represented by Martyn's *Clava tessellata*, a species which is No. 97 in his third volume. This course is inadmissible, because *tessellata* is not one of the original species of 1784, but at earliest dates from 1786.

The name *Clava* in Martyn's sense appeared subsequently among the early writers only once. In the anonymous Museum Calonnianum it is used, practically as Martyn used it, for the whole group of *Cerithium* in the Lamarckian sense. But, as I have hitherto maintained that a work with no ostensible author or publisher is not entitled to be cited as valid in systematic synonymy, I do not consider that this incident

¹³ *Proc. Acad. Nat. Sci. Phila.* for 1901, p. 392.

¹⁴ Such as *Buccinum scutulatum* (Martyn) Gmelin, and *Patella calyptra* (Martyn) Gmelin. See also pp. 3483, 3490, 3498, 3690, 3691, 3697, 3702, and 3712 (and many others) for citations by Gmelin of Martyn's figures.

¹⁵ *Bull. Soc. Zool. de France*, IX, p. 23, 1884.

adds any strength to the case for the adoption of *Clava* Martyn as a systematic name.

Gmelin's use of the word *Clava* in a generic sense for a Cœlenterate animal, though cited by Cossmann as of 1789, is really not earlier than 1791, and until very recently has been regarded as of 1792.¹⁶

On the twenty-sixth page of part VI of Gmelin's work (p. 3056, No. 19) there is a reference to a paper of Braun, published in the tenth volume of the *Schriften der Gesellschaft Naturforschende Freunde zu Berlin*, page 58. This paper has been stated to have been issued in 1792, and if so the volume in which it is cited cannot be of earlier date.¹⁷

Lately M. Vignal, who has made a specialty of the Cerithiidæ, proposed the name¹⁸ *Pseudovertagus* for forms allied to *C. aluco* Linné, which have an external appearance more or less like those of the type of *Murex vertagus* Linné, but want the strong spiral plication on the pillar. After examining the specimens in the Museum, I am of the opinion that this separation is absolutely justified. The fossil forms in Europe, according to M. Cossmann, are of this latter type, and so are most of the American species; but we have at least one species in the Chipola Oligocene which is unmistakably of the type of *C. vertagus*, so far as the plicate axis is concerned. There is also a recent species resembling *C. kochii* Philippi, at Barbados. The absence of the Indo-Pacific type from the European Tertiaries may therefore be due to its absence from that region faunally, and not to any ancestral character of the *Pseudovertagus*.

We are now in a position to review the facts above cited.

We may judge from the aggregate of the data that, disregarding prelinnean polynomialists, the first binomial author to recognize the

¹⁶ Gmelin's Vol. VI of his edition of the *Systema Naturæ* bears no date on the title.

¹⁷ The paper referred to is M. Braun, Beitr. zur Gesch. d. Eingeweidewürmer. See Carus and Englemann, *Bibl. Zool.*, I, p. 362, where the date of Braun's paper is given as 1792. Also H. C. Bolton, *Cat. Sci. Periodicals*, second edition, p. 1023, where the date of Vol. X, above referred to, is given as 1792.

It is possible that Braun's paper was issued earlier in separate form, but in that case we should not expect that Gmelin would cite the page of the completed volume, instead of the page of the separate issue. Possibly some part of Vol. X may have appeared earlier than the date of the completed volume. Ant. Collin discusses the question in the *Zool. Anzeiger* for January, 1899, pp. 4, 5, and comes to the conclusion that at least a portion of Gmelin's part VI appeared between August 21, 1790, and May 14, 1791, probably in one of the early months of 1791. I have for some time followed Carus and Englemann and Bolton in using the date 1792 for this volume of Gmelin, instead of 1790 as used by Sherborn in the *Index Animalium* (p. 221), since the latter does not give detailed data in his preliminary bibliography; but after Collin's discussion, called to my attention by Dr. Stiles recently, it seems reasonable to compromise on 1791 as the most probable date.

¹⁸ *Bull. Mus. Hist. Nat. Paris*, X, p. 358, 1904.

group commonly called *Cerithium* in nomenclature was Martyn, who named it *Clava*, having two species in his first publication, of which the first was a "*Vertagus*" and the second a *Pyrasmus*.

The next author was Bruguière, who habilitated *Cerithium* Adanson, without mentioning a type and with limits, as M. Cossmann expresses it, which "ne répond à rien de bien précis." Lamarck's first effort to select a type fell on a species of *Pseudovertagus*.

In this¹⁹ he was followed by Link (1807), Montfort (1810) and Cuvier (1817). Lamarck's second effort reverted to the antique type represented by *C. nodulosum*.

In this he was followed by Schumacher (1817), who included the *aluco* group under *Cerithium* (Lam.) proper, and separated the *Clava* group with plicate axis under the untenable name of *Vertagus*. Most modern authors have, in a general way, followed Schumacher.

Bruguière, Lamarck and Deshayes were familiar with Martyn's work, referred to it with high praise, and cited his names in synonymy; the loose practice of changing specific names to suit the fancy of the author, without reference to priority, being still in vogue.

M. Cossmann's criticisms have been made with such an air of confidence and so much particularity of detail, that the incautious reader might well suppose they were founded upon an accurate determination of the facts. Yet in the present case it has been shown that of three dates essential to a right decision, those of Martyn, Bruguière and Gmelin, as printed by M. Cossmann,²⁰ each and every one is wrong. Only because they are incorrect is he able to arrive at a decision different from mine, first published in 1892²¹ and elaborated by Pilsbry in 1901.²² Since an analysis of my previous paper on Martyn appeared in M. Cossmann's *Revue de Paléozoologie*, shortly after its publication, it seems difficult to account for the presence of the false date 1789 for Martyn's first volume in the last number of the *Essais*, and one would expect, after Sherborn and Woodward's elucidation of the dates of the several parts,²³ that a French author of M. Cossmann's standing would have informed himself of the dates of publication of the *Encyclopédie Méthodique* when they bore directly upon the subject he was discussing.

Whatever view may be taken of Martyn's work, nothing can prevent

¹⁹ *Vertagus* and *Pseudovertagus* being at that time not differentiated.

²⁰ *Essais de Paléoconch. Comp.*, VII, pp. 65, 84, 1907.

²¹ *Trans. Wagner Inst.*, III, part II, p. 290, 1892.

²² *Proc. Acad. Nat. Sci. Phila.* for 1901, p. 392.

²³ *Proc. Zool. Soc. London*, 1893, pp. 582-584.

the recognition of Lamarck's type of 1799 as the type of the genus *Cerithium*, provided one accepts the international code of rules governing zoological nomenclature.²⁴ The rejection of *Clava* Martyn would not alter this fact. But, in any case, this system of nomenclature of the *Cerithiidae*, laboriously built up by M. Cossmann on an insufficient knowledge of the nomenclatorial history of the family, must submit to profound modifications before it can be approved by those who accept the international rules.

²⁴ *Règles internationales de la nomenclature Zoologique adoptées par les Congrès Internationales de zoologie*, Paris, Rudeval, 1905, 8°, p. 57.